

KU PA 340360-13 A, power amplifier

3400 ... 3600 MHz • 13 W

This power amplifier provides high linearity. An isolator at the output protects the semiconductor devices from reverse power. Very good harmonic rejection is achieved. Two detector outputs allow permanent monitoring of forward and reverse power. Typical applications of this amplifier are digital broadcast and communication systems like Digital Video Broadcast (DVB) or Digital Multimedia Broadcast (DMB). The amplifier contains an automatic level control (ALC). The desired output power can be adjusted continuously, from nearly zero to the maximum output power.



Features

- GaAs FET technology
- High linearity (class A operation)
- Good harmonic rejection
- Isolator for protection against high VSWR
- Reverse polarity protection
- Monitor outputs for forward and reverse power detection (DC voltage)
- Adjustable ALC (automatic level control)
- ON / OFF control with DC voltage (ON at 5 ... 14 V DC)

Applications

- Digital broadcast systems (DVB, DMB)
- COFDM systems using modulation types QPSK, QAM
- Analog transmission systems
- With reduced power suitable for DATV (digital amateur television)

Important notes

Please notice the following:

- The technical specifications refer to room temperature.
- The power amplifier doesn't contain any coaxial relays.
- The recommended combination of heat sink and fan(s) is only specified for an ambient temperature of 25 °C.
- Further information about dimensioning of heat sinks is available on our FAQ site.

Technical specifications:

Frequency range	3400..3600 MHz
Input power for P1dB	typ. -13 dBm
Maximum input power	0 dBm
Output power P1dB	typ. 41.1 dBm, min. 40.8 dBm typ. 13 W, min. 12 W
Output power P3dB	min. 42.3 dBm
Output power COFDM (1)	typ. 34.7 dBm, min. 34 dBm typ. 3 W, min. 2.5 W
Gain (small signal)	typ. 55 dB, min. 53 dB
Gain flatness (small signal)	+/-0.5 dB (typ.)
Harmonic rejection	min. 45 dB @ 41.7 dBm (CW)
IM3 (2)	min. 35 dBc @ 37 dBm PEP
Efficiency	min. 24 % @ 41.7 dBm (CW)
Input return loss (S11)	min. 13 dB
ON voltage	+5 ... 14 V DC
Supply voltage	+12 ... 14 V DC

Quiescent current	typ. 4.3 A
Current consumption @ P1dB	typ. 5 A
Forward detection	yes (diode detector)
Reflected power detection	yes (diode detector)
Operating case temp. range	-20 ... +55 °C
Input connector / impedance	SMA-female / 50 ohms
Output connector / impedance	SMA-female / 50 ohms
Case	milled aluminium
Dimensions (mm)	158 x 60 x 20
Weight	320 g (typ.)
(1)	Measured with QAM 64, single carrier, EVM: 2%
(2)	Measured 2-tone, frequency spacing: 1 MHz